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The Nexus Integration Team

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The Nexus Integration Team (NIT) is a new role that is essential within the Nexus™ framework. It is a role that is performed by a team of people. As described in the Nexus Guide, "the Nexus Integration Team exists to coordinate, coach, and supervise the application of Nexus and the operation of Scrum so the best outcomes are derived." The Nexus Integration Team provides transparent accountability of integration among the Scrum Teams in the Nexus Integration. The Nexus Integration Team consists of the Product Owner, a Scrum Master, and Nexus Integration Team members as shown in Figure 1.

Figure 1. Nexus Integration Team Roles

Product Owner
Accountable for maximizing value of the product, Product Owner for the Nexus

Scrum Master
Responsible for ensuring the Nexus framework is understood and enacted, often facilitates the Nexus level events

Development Team Members
Accountable for successful integration of all work by all Scrum Teams.

Often members of Scrum teams within the Nexus

Nexus is made up of three to nine Scrum Teams working together off of a single Product Backlog to deliver one product. The Product Backlog is ordered and refined by the *Product Owner*, who is responsible for maximizing the value of the product and the work done by the Nexus. As mentioned in both the Scrum and Nexus Guides, "How this is done may vary widely across organizations, Scrum Teams, and individuals," however ultimate accountability lies with the Product Owner. The Product Owner is on the Nexus Integration Team, and the services of the Product Owner role are represented on every team in the Nexus. It doesn't however mean that the Product Owner is working in a vacuum

or does all of the work. As in Scrum, the role of the Product Owner is having the accountability for the Product Backlog, but they can work with others to help better define and refine it.

The *Scrum Master* on the Nexus Integration Team is responsible for ensuring that Nexus is understood and enacted. They may facilitate Nexus level events (Nexus Daily Scrum, Nexus Sprint Planning, Cross-Team Refinement, Nexus Sprint Review, Nexus Retrospective) or provide support to others performing facilitation. They may also facilitate the Scrum Master community within the Nexus to support each team's efforts in order to maximize the value of Scrum.

The Nexus Integration Team will also consist of *Nexus Integration Team* members. These are made up of Development Team Members from the different Scrum Teams within the Nexus who are accountable for ensuring that an Integrated Increment (the combined work completed by a Nexus) is produced at least every Sprint. Other than the role of the Product Owner, composition of the Nexus Integration Team may change over time depending on the current needs of the Nexus. (To learn more about facilitation techniques for Nexus level events, see other white papers on Nexus Sprint Planning and Cross-Team Refinement.)

It is common for members of the Nexus Integration Team to be drawn from Scrum Teams within the Nexus. In this case, membership on the Nexus Integration Team is part time. Membership in the Nexus Integration Team can be part time or full time. However, priority must always be given to the Nexus Integration Team as this is work that affects the whole Nexus and the work of many.

Accountability

The Nexus Integration Team is accountable for ensuring that an Integrated Increment is produced at least every Sprint. This ensures that the integrated product represents focus across the teams, rather than just the efforts of individual teams.

Scaled software development requires tools and practices that individual Scrum Teams may not frequently use. Therefore, the Nexus Integration Team should consist of professionals who are technically proficient. However, integration is broader than code. How teams work together and collaborate is a vital part of integration. For instance, how teams react to breaking builds or practice collective code ownership all form part of successful integration. The Nexus Integration Team needs to have members with both technical and people skills.

Activity

Nexus Integration Team as Coaches on Member Scrum Teams
Nexus Integration Team Members should possess the skills and traits required to enable the Scrum Teams within the Nexus to constantly improve the state of the Integrated Increment.
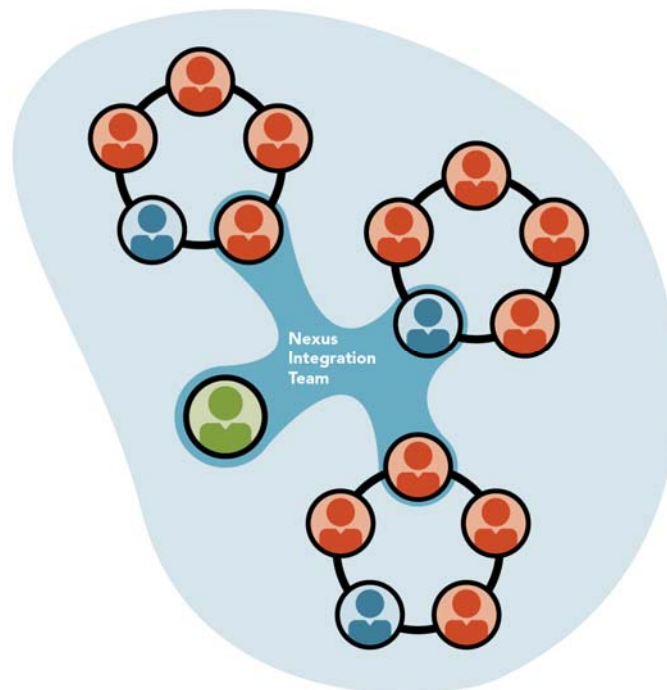
Activities that the Nexus Integration Team may perform daily include:

- Helping coordinate work between the teams
- Raising awareness of dependencies as early as possible
- Ensuring integration tools and practices are known and used
- Serving as consultants, coaches, and communication links

- Sometimes assisting with the work (as appropriate as necessary)
- Facilitating shared architecture/infrastructure
- Constantly providing transparency of integration

It is important that the people serving on the Nexus Integration Team are servant leaders and have a coaching approach to improvement. This is not the 'all-star' team. By staffing the Nexus Integration Team with members from the Scrum Teams within the Nexus as shown in Figure 2, we avoid a "them and us" divide.

Figure 2. Nexus Integration Team consists of Members from the Scrum Teams

The Nexus Integration Team typically does not work as a Scrum Team together, pulling from the Product Backlog. Rather, they are a community of coaches and guides providing service to the Scrum Teams within the Nexus. As they are also members of those Scrum Teams, the Nexus inherently provides its own leadership.
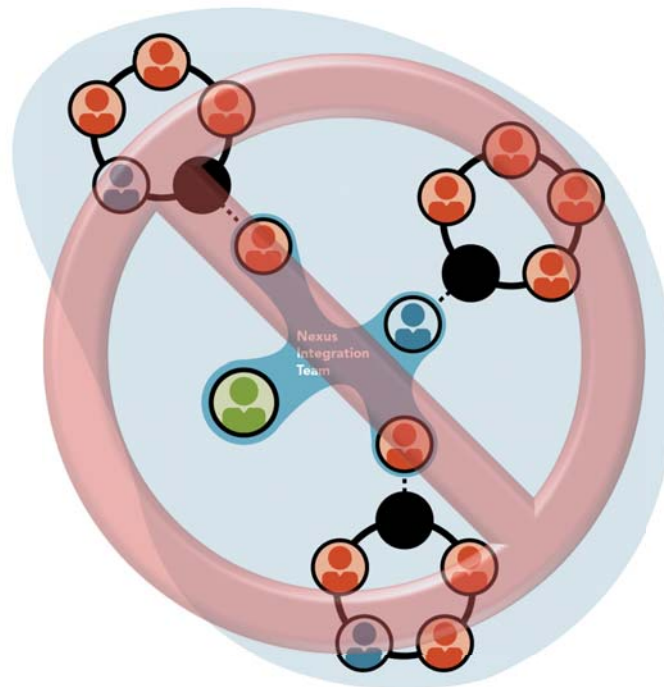
Nexus Integration Team as a Scrum Team

If there are serious integration concerns or issues, as a last resort, the Nexus Integration Team may decide that they need to pull work from the backlog and work as a Scrum Team. In this case they move from their existing Scrum Teams into the Nexus Integration Team full-time as shown in Figure 3 until the issues are resolved. They may choose to do this because:

- The work requires skills that only members on the Nexus Integration Team possess
- The product is in an unknown state
- The Scrum Teams within the Nexus are temporarily unable to successfully integrate

This is not a sustainable working model as it means that the Nexus has failed to scale Scrum successfully and work slows to the pace of a single team – the Nexus Integration Team. Ultimately, if only the Nexus Integration Team can do the work, then scaling has failed. However, the decision to work this way should be triggered by the Nexus Integration Team, which includes the Product Owner, as a temporary last resort in order to fulfill their accountability. .

Figure 3. Nexus Integration Team acts as an individual Scrum Team

Having the Nexus Integration Team work as a Scrum Team is considered "fail mode." This should be a short term tactical choice. In general, it is a good idea for members of the Nexus Integration Team to work with the Scrum Teams within the Nexus to transfer scarce skills and knowledge through pairing and coaching.

Membership

Other than the role of the Product Owner, membership in the Nexus Integration Team does not have to be permanent. In fact, it should be situational. The types of skills that are needed should change over time, leading to changes in team composition.

The Nexus may decide to invite people from outside the Nexus to join the Nexus Integration Team. These may include representatives from areas that are critical to the success of the Nexus. If they share the same integration accountability, then their participation in the Nexus Integration Team can lead to positive outcomes.

Conclusion

The Nexus Integration Team is not a management team nor should they be a team of people with sliced expertise and experience. They are a team of professionals usually from the individual Scrum Teams within the Nexus who ensure that practices and tools are implemented, understood, and used to detect dependencies. They are accountable for ensuring that an Integrated Increment is produced at least every Sprint. Their focus on integration should include dealing with both technical and non-technical issues within the Nexus.

The Nexus Integration Team acts precisely as a Scrum Master acts to a Scrum Team, not as "in charge," but through servant leadership and coaching. They should use bottom-up intelligence from the teams to resolve issues and improve. Success at scale results from every team being able to constantly contribute to increased product development.

To experience and learn more about the Nexus Framework and about the role of the Nexus Integration Team, learn more through our Scaled Professional Scrum workshops.
www.scrum.org/sps